

Specification for

Galvanized mild steel cisterns and covers tanks and cylinders —

Part 1: Imperial units

Co-operating organizations

The Hardware and Ironmongery Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

- Aluminium Federation
- British Ironfounders' Association
- British Lock & Latch Manufacturers' Association
- British Plastics Federation
- British Waterworks Association*
- Cast Butt Hinge Manufacturers' Association
- Copper Development Association*
- D.S.I.R. — Building Research Station*
- Guild of Architectural Ironmongers
- Institution of Municipal Engineers*
- London County Council
- Metal Window Association Limited
- Ministry of Public Building and Works
- National Brassfoundry Association
- National Federation of Builders' and Plumbers' Merchants*
- National Federation of Building Trades Employers
- National Federation of Ironmongers
- Royal Institute of British Architects*
- The Royal Institution of Chartered Surveyors
- Zinc Development Association*

The Government department and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the Committee entrusted with the preparation of this standard:

- Associated Tank Manufacturers
- British Electrical & Allied Manufacturers' Association
- British Electrical Development Association
- British Iron & Steel Federation
- British Non-Ferrous Metals Research Association
- Copper Cylinder & Boiler Manufacturers
- Copper Tube Fittings Manufacturers' Association
- Galvanized Tank Manufacturers' Association
- Gas Council
- Heating & Ventilating Contractors Association
- Hot Dip Galvanizers Association
- Institute of Builders
- Institute of Plumbing
- Institute of Welding
- Institution of Electrical Engineers
- Institution of Heating & Ventilating Engineers
- Institution of Water Engineers
- Metropolitan Boroughs Standing Joint Committee
- Metropolitan Water Board
- Ministry of Housing & Local Government
- National Federation of Plumbers and Domestic Engineers (Employers)
- Royal Society for the Promotion of Health
- Scottish Association of Manufacturing Coppersmiths
- War Office

This British Standard, having been approved by the Hardware and Ironmongery Industry Standards Committee and endorsed by the Chairman of the Building Divisional Council, was published under the authority of the General Council on 31 January 1964

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Foreword

This standard makes reference to the following British Standards:

BS 15, *Mild steel for general structural purposes*.

BS 729, *Zinc coatings on iron and steel articles — Part 1: Hot-dip galvanized coatings*.

BS 1449, *Steel plate, sheet and strip*.

BS 2779, *Fastening threads of BSP sizes (formerly in BS 84:1940)*.

BS 2989, *Continuously hot-dipped galvanized plain steel sheet and coil*.

BS 3416, *Black bitumen coating solutions for cold application*.

This British Standard has been revised to take account of changes in manufacturing processes which have occurred since the issue of the 1951 edition. At the same time, the opportunity has been taken to incorporate the addendum, published in 1955, for galvanized mild steel covers for cisterns; to facilitate that incorporation, it was found desirable to sectionalize the specification: thus, separate sections now exist for the three groups of products — cisterns and their covers; tanks; cylinders.

Other principal changes in this revision are:

- a) The deliberate elimination of the terms “nominal capacity” and “actual capacity” and the inclusion of definitions for “capacity (of a cistern)” and “water line”.
- b) The alteration of the dimensioning nomenclature for cisterns and tanks.
- c) The elimination of sizes C7 and C10 cisterns and the inclusion of a new cistern (SC.150) of 108 gallons capacity to water line.
- d) The elimination of sizes T1, T7 and T8 tanks.
- e) The elimination of sizes Y2 and Y7 cylinders.
- f) The elimination of those dimensions relating to overflow or warning pipe details and inlet and outlet details for cisterns.
- g) The elimination of those dimensions relating to heights of connections for tanks except for a recommended minimum height for side entry immersion heaters.
- h) The inclusion of a specification for the internal coating of cisterns with a bitumen solution, if so ordered.
- j) The alteration of the specification for galvanizing so as to require compliance with BS 729-1¹⁾.
- k) The substitution, for the “BS size numbers”, of a new style of “BS type references”, in which designating letters (e.g. “SC” for “steel cistern”) are used in conjunction with numerals (e.g. 60, 100) which indicate the obsolescent concept of “nominal capacity”. Thus “SC.80” replaces “C.12” and carries the meaning “an open top cistern with what is referred to still in the trade as a nominal capacity of 80 gallons but, in fact, having a capacity to water line of 58 gallons”.
- l) The inclusion of clauses entitled “Designation (of cisterns, etc.) for ordering purposes”, to facilitate communication between purchasers and vendors.
- m) The admission of half inside rolling as a method of forming the top edges of cisterns up to type reference SC.60.
- n) The relaxation, in certain circumstances, of the requirement that cisterns above 15 gallons capacity shall have corner plates.
- o) The relaxation, in certain circumstances, of the requirement that turnover flanges of cisterns shall be double turned.
- p) The relaxation of the requirement that all cylinders shall have a hand hole; that feature is now optional at the choice of the purchaser.

¹⁾ BS 729, “Zinc coatings on iron and steel articles”. Part 1, “Hot-dip galvanized coatings”.

- q) The introduction of terms to distinguish top entry immersion heaters from side entry immersion heaters.
- r) The introduction of clauses covering gas circulators for tanks and cylinders, if so ordered.
- s) The use of galvanized steel sheet, for covers only, as an alternative to “galvanizing after made”.

During the preparation of this revision, a new method of testing cisterns up to type reference SC.60 by immersion instead of by filling with water was approved. An amendment slip to that effect was issued in January, 1963 and its contents have been embodied in this revision of the standard.

Six standards, covering water storage vessels mainly for domestic use, now form a series to which others may be added when such a course is considered necessary. The five other standards in this series are:

BS 699, *Copper cylinders for domestic purposes.*

BS 1565, *Galvanized mild steel indirect cylinders.*

BS 1566, *Copper indirect cylinders.*

BS 2777, *Asbestos cement cisterns.*

BS 3198, *Combination hot water storage units (copper) for domestic purposes.*

NOTE 1 Where metric equivalents are stated, the figures in British units are to be regarded as the standard. The metric conversions are approximate. More accurate conversions should be based on the tables in BS 350, “*Conversion factors and tables*”.

NOTE 2 In place of the customary, but incorrect, use of the pound as a unit of force, the unit called a pound-force (abbreviation lbf) has been used in this standard. It is that force which, when acting on a body of mass one pound, gives it an acceleration equal to that of standard gravity.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 22, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Section 1. General

1 Scope

This British Standard applies to galvanized mild steel cisterns (in two grades, A and B), cistern covers, tanks (in two grades, A and B) and cylinders (in three Grades, A, B and C). The capacities made are from 4 to 740 gallons in the cistern range, from 21 to 34 gallons in the tank range and from 16 to 97 gallons in the cylinder range. The cylinders are intended for fixing in the vertical position.

The information which should be provided by an intending purchaser is listed in Appendix A.

2 Definitions

For the purposes of this British Standard, the following definitions apply:

2.1

cistern

an open top rectangular vessel

2.2

tank

a closed rectangular vessel

2.3

cylinder

a closed cylindrical vessel with domed ends

2.4

water line

the highest water level at which a cistern is designed to work

2.5

capacity

(of a cistern.) The capacity of a cistern when filled to the water line

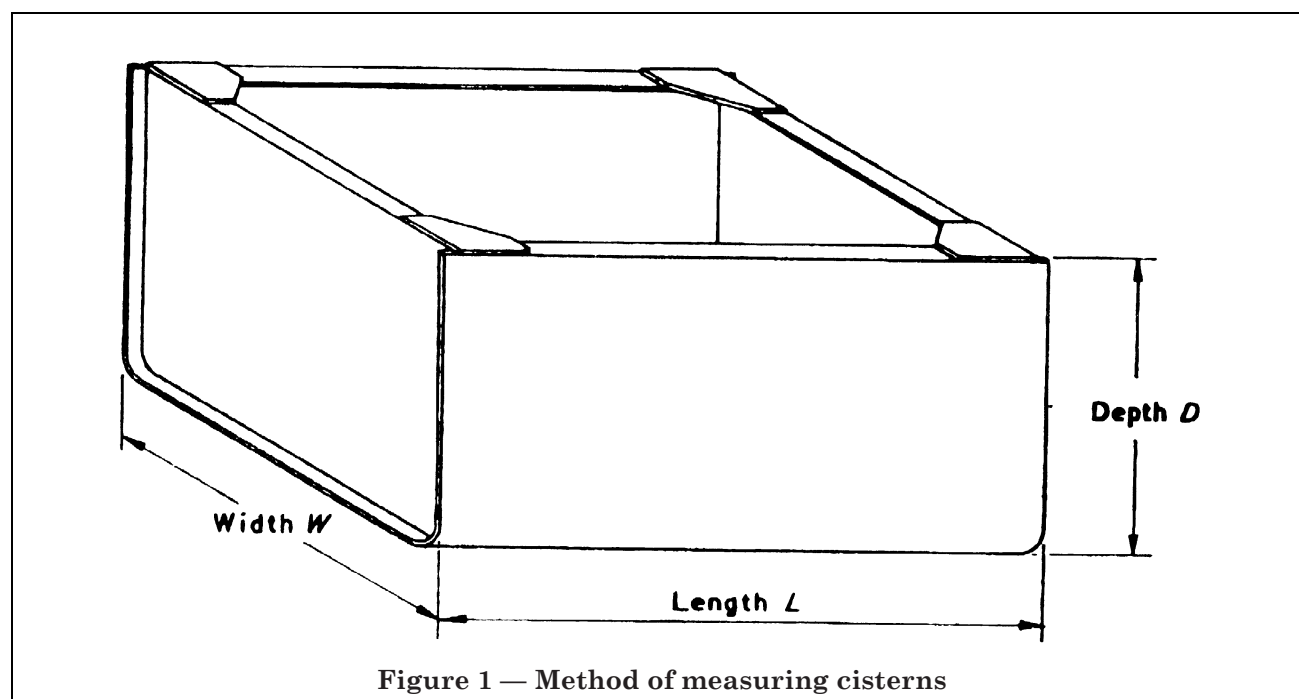
Section 2. Cisterns and covers

3 Designation of cisterns and covers for ordering purposes

- a) *Cisterns*. For ordering purposes, galvanized mild steel cisterns shall be designated by the appropriate BS type reference in Table 1, followed by the grade required.
- b) *Covers*. Galvanized mild steel covers for galvanized mild steel cisterns shall be supplied only if specifically ordered. They shall be designated as “cover for²⁾ cistern”.

4 Dimensions of cisterns and covers

- a) *Cisterns*. The dimensions of cisterns and the thickness of material used shall conform to the details given in Table 1. Cisterns shall be measured externally, over the rivets, if any (see Figure 1).
- b) *Covers*. The dimensions of covers and the thickness of material used shall conform to the details given in Table 1. Covers shall be measured as shown in Figure 2.



This drawing is typical only and does not purport to indicate a standard method of construction; it is a view of one type of welded cistern showing sides projecting at each end. See Note b to Table 1.

²⁾ Here insert the appropriate BS type reference from Table 1; for example: “Cover for SC.350 cistern”.

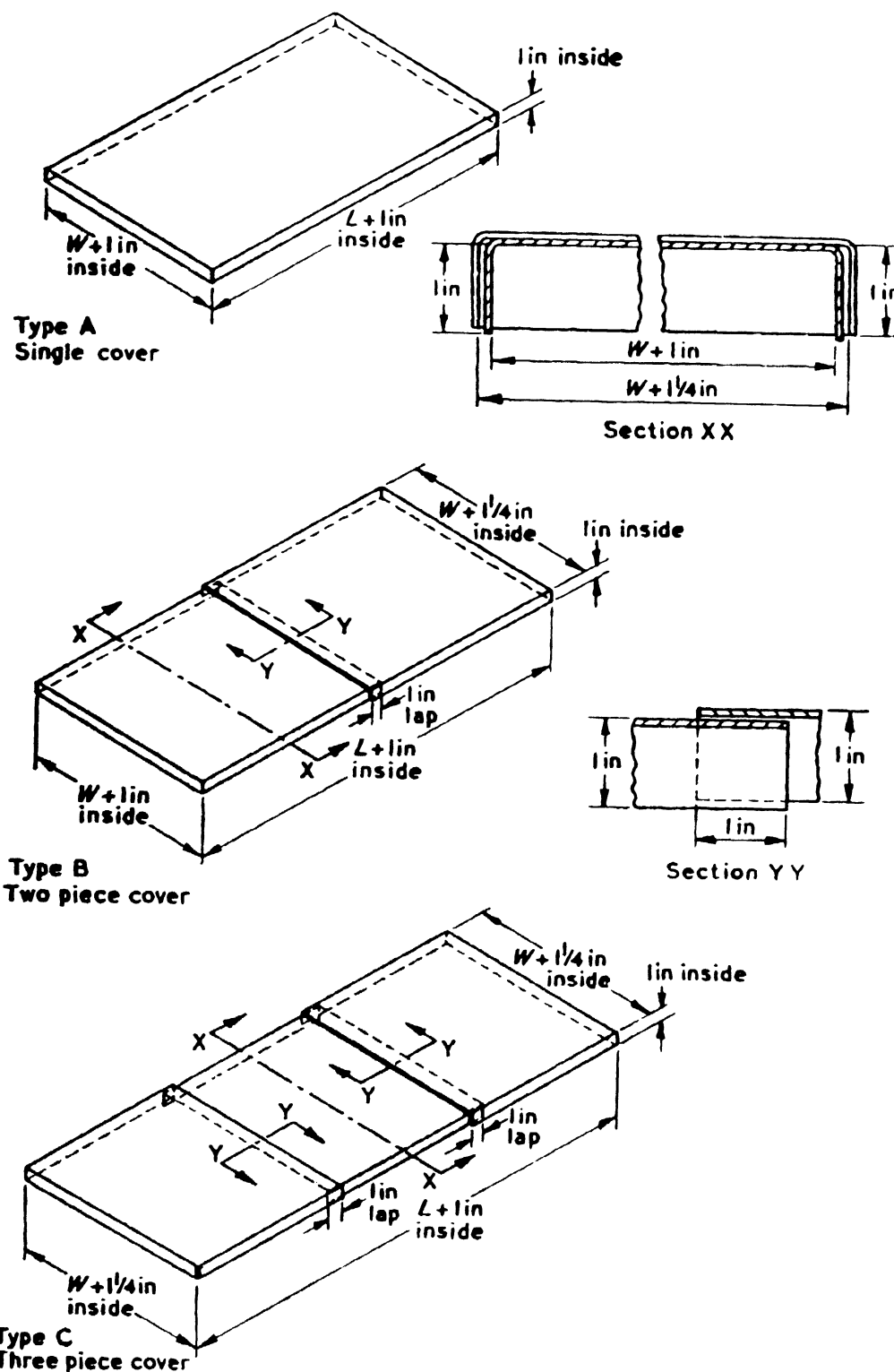


Figure 2 — Method of measuring and constructing covers